Sacramento and San Joaquin River Basins

Comprehensive Study

Our mission is to develop a system-wide, comprehensive flood management plan for the Central Valley to reduce flood damage and integrate ecosystem restoration.

In January 1997, Californians experienced one of the most costly and most geographically extensive flood disasters in the State's history. In the Central Valley, the flood management systems for the Sacramento and San Joaquin Rivers were stressed to capacity and beyond. Levees on the Sacramento River and its tributaries sustained two major breaks. On the San Joaquin River, levees failed in more than two dozen places. Several people died, local residents lost their livelihoods, property losses were about three quarters of a billion dollars, and thousands of livestock perished. The 1997 flood created further concerns about the adequacy and dependability of the Central Valley's flood management system.

In response to this devastation, the State formed a Flood Emergency Action Team (FEAT). FEAT's final report recommended a series of potential strategies that would improve flood management in the Sacramento and San Joaquin river basins. Acting on these recommendations, Congress and the State Legislature appropriated funds to develop a flood management plan for the combined watershed on the Sacramento and San Joaquin river systems.

To implement this plan, the U.S. Army Corps of Engineers and the State of California Reclamation Board joined together to initiate the Sacramento and San Joaquin River Basins Comprehensive Study. The Comprehensive Study extends traditional flood management approaches into a broader array of integrated solutions that consider not only flood protection, but also ecosystem restoration along the river systems.

The Reclamation Board,
State of California

U.S. Army Corps of
Engineers
Sacramento District

E-006936

Improving Flood Management

The great Central Valley of California contains the two largest river systems in the state: the Sacramento River in the north and the San Joaquin River in the south. The Sacramento and San Joaquin River Basins Comprehensive Study will address the combined watershed of these two major river systems — a drainage area of more than 43,000 square miles. Some cities in this area include Redding, Red Bluff, Chico, Colusa, Yuba City, Marysville, Sacramento, Stockton, Manteca, Modesto, Merced and Fresno. The general planning objectives of the Comprehensive Study are:

- Improve flood management throughout the system
- Protect and restore riparian habitat, riverine and wetlands habitat system-wide
- Resolve policy issues and address institutional procedures that limit options

Meet Changing Needs

Since the mid-1800s, the Sacramento and San Joaquin river systems have been modified and managed to provide flood protection, water supply, transportation and other water-related activities that have contributed to the economic growth of California and the nation. Through the years, the public priorities have changed and lessons have been learned regarding more effective approaches to long-term flood management and ecosystem restoration.

A New Approach

To meet the changing needs of the Central Valley, the flood management system must protect its current resources and prepare for future population increases in California.

It must include approaches that take into account the many interrelated benefits offered by the river systems.

The Sacramento and San Joaquin River Basins Comprehensive Study has brought together diverse groups and participants in the development of a truly comprehensive strategy for

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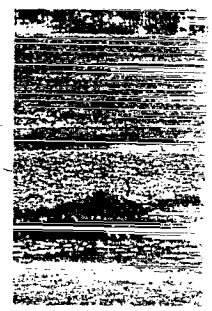
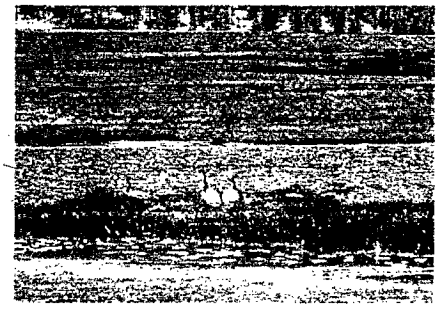


flood damage reduction and integrated ecosystem restoration. By integrating the contributions of a broad variety of interests, new and innovative approaches and concepts for reducing flood damages and restoring degraded river corridor habitat will be combined into strategies, to address the problems in the system. Wherever possible, projects are being identified that can be initiated prior to the full implementation of the selected comprehensive strategy so that local areas see immediate benefits of improved flood management.

Regional Coordination

While there are a number of local studies and programs addressing water supply, water quality, and ecosystem restoration in the Central Valley, the Sacramento and San Joaquin River Basins Comprehensive Study is unique. It will examine a comprehensive strategy incorporating both flood damage reduction and river corridor ecosystem restoration in the Central Valley. Past and current efforts to address these issues form the starting point for the Comprehensive Study.

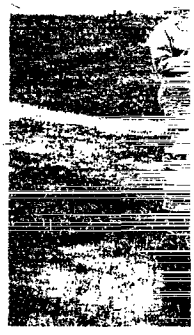


All proposed flood damage reduction and ecosystem restoration measures will be coordinated and integrated with: the San Joaquin River Management Program, the Upper Sacramento River Fisheries and Riparian Habitat Plan (SB 1086), the Central Valley Project Improvement Act, the CALFED Bay-Delta Program and other studies and programs.

Implementation

While developing an overall strategy for flood damage reduction and integrated ecosystem restoration, opportunities for immediate implementation will be identified and "spun out" to existing authorities where possible. Where authorities do not exist, recommendations will be made for immediate implementation under a new authority consistent with the overall long-term strategy. This implementation plan will map out the full execution of the Comprehensive Study, including timing and priorities, cost sharing opportunities and local partnerships that will help ensure needs are met on a local basis, in addition to the comprehensive benefits to the river basins as a whole.

Early implementation of critical projects will help ensure the Central Valley is protected from future flood disasters while the full comprehensive flood management plan is being developed and implemented.



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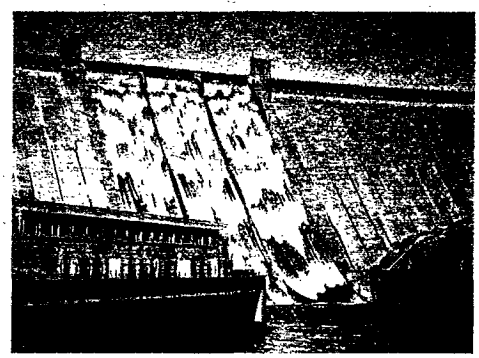
Forming Alternatives

The Study Team has reviewed existing studies and reports that recommend measures to address the problems of flooding and ecosystem degradation in the Central Valley. It is working closely with stakeholders and technical experts to develop new and comprehensive approaches.

These measures may include:

- Re-operating flood storage and existing system reservoirs
- Protecting streambanks and raising existing levee systems
- Setting back levees and integrating habitat with sustained agriculture
- Creating meanderbelts that protect important agricultural lands and riparian habitat
- Creating transient storage with wetlands and riparian habitat
- Creating new upstream storage
- Creating new flood bypasses



Policy Constraints

Existing policies and funding structures were not created to deal comprehensively with system-wide flooding and ecosystem issues. Too often, these policies and structures have led to a fragmented and localized approach to regional problems. The Comprehensive Study Team will identify necessary changes to existing policies that can benefit the future of this and other similar multi-objective system-wide programs.

What makes this study effort different is its focus on forming a truly comprehensive flood management solution with integrated ecosystem restoration while recognizing the importance of early implementation of key projects that will have an immediate benefit to local residents.

Mike Bonner,
Comprehensive Study Team

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Study Timeline

Phase I

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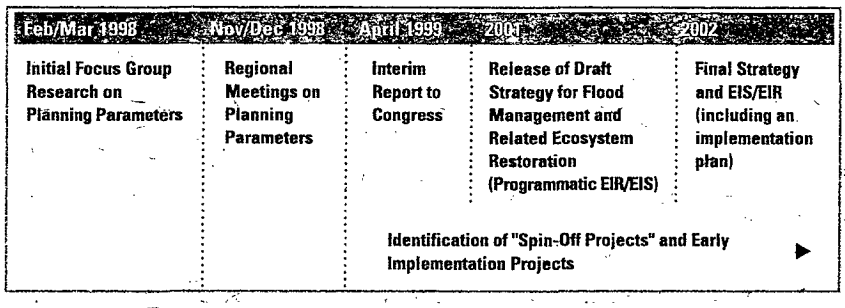


The team has also identified some flood damage reduction measures and associated ecosystem restoration measures to be modeled and evaluated in Phase II. Phase I will conclude with an Interim Report to Congress which includes a summary of Phase I progress and a Final Post-Flood Assessment.

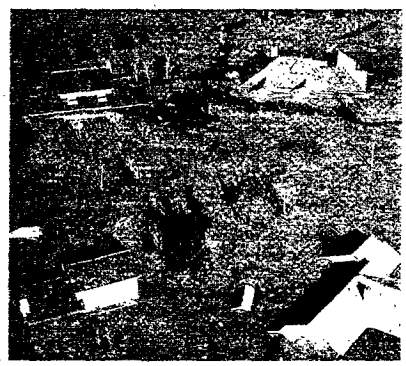
Phase II

Phase II will continue the development and calibration of basin-wide hydrologic and hydraulic models and ecosystem response models. A broad array of measures will be evaluated with these models to determine their flood damage reduction and associated ecosystem restoration effectiveness. Phase II will conclude with a programmatic Environmental Impact Statement/Environmental Impact Report that describes the strategy for flood damage reduction and integrated ecosystem restoration measures.

Project Integration

Development of a comprehensive strategy for flood damage reduction and integrated ecosystem restoration is the key goal of the Comprehensive Study. The overall strategy will include a formulation of measures that will guide future planning and ensure that site-specific projects and actions are fully coordinated and integrated into the comprehensive flood management systems of the Sacramento and San Joaquin River Basins.

The flood damage reduction and integrated ecosystem restoration strategy will also facilitate implementation of existing and proposed projects. Some projects for early action will be identified, developed to the extent possible, and recommended for authorization and implementation. Ongoing or proposed projects that meet planning objectives will be categorized as one of the following:



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Spin-Off Projects

Spin-off projects must be consistent with the overall objectives of the Comprehensive Study and are being moved into other federal, state or non-governmental programs for focused study, design or implementation. These projects must:

- Meet Planning Objectives
- Have a Project Proponent or Sponsor
- Be Widely Acceptable
- Have Existing Authorities and Secured Funding
- Be Generally Small Scale

Early Implementation Projects

Early implementation projects are being identified, developed and recommended for authorization and implementation in the final report. These projects will:

- Meet Planning Objectives
- Have a Project Proponent or Sponsor
- Be Widely Acceptable
- Require Congressional and Legislative Authorization and Appropriation
- Encourage Innovative Partnerships

Participating Agencies

Because of its comprehensive nature, the Sacramento and San Joaquin River Basins Comprehensive Study must take full advantage of the expertise and capabilities of the various participating agencies. An Executive Committee, which meets quarterly, is co-chaired by the Army Corps of Engineers and The Reclamation Board of the State of California. The Committee was established to resolve emerging policy issues and to ensure consistent and full coordination between the agencies.

U.S. Army

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Executive Committee

Partners

U.S. Army Corps of Engineers

State of California
The Reclamation Board

Participating Agencies

Federal

- *Fish and Wildlife Service*
- *Forest Service*
- *Environmental Protection Agency*
- *Federal Emergency Management Agency*
- *Bureau of Land Management*
- *Geological Survey*
- *Natural Resources Conservation Service*
- *National Marine Fisheries Service*
- *Bureau of Reclamation*

State

- *Department of Fish and Game*
- *State Water Resources Control Board*
- *Department of Water Resources*
- *Department of Parks & Recreation*
- *Department of Boating & Waterways*
- *State Lands Commission*
- *Office of Emergency Services*
- *Department of Food & Agriculture*
- *CALFED Bay-Delta Program (Federal/State)*

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Sacramento
and
San Joaquin
River Basins

Comprehensive Study

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